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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,009	01/11/2002	Susan A. Alie	Analog 5911	8144

7590 04/14/2004

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Boston, MA 02110

EXAMINER

LE, THAO X

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 04/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,009

Applicant(s)

ALIE ET AL.

Examiner

Thao X Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 23, 24 and 30-39 is/are pending in the application.
- 4a) Of the above claim(s) 27-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 23, 24 and 30-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response the Applicant's amendment dated 02/23/04
2. Claims 9-22, 25-26 are cancelled.
3. Claims 27-29 are non-elected claims that are missing from the amendment dated 02/23/04.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 23, and 30-34, 39 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5561307 to Mihara et al.

Regarding claims 1, 32, Mihara discloses a metallization stack in an integrated MEMS device, the metallization stack comprising: a substrate 30, fig. 9 column 10 line 2, having an electrically conductive structure; a field oxide 24, column 10 line 46 having a contact hole 26 therein, fig. 3, formed over said substrate 30, a silicide layer 36, column 10 line 58, formed in said contact hole 26 of said field oxide 24, a titanium-tungsten layer 22, column 10 lines 7-8, formed directly on said silicide layer 36, to operatively contact said electrically conductive structure in said substrate 30, and a platinum layer 14a, column 11 line 34 formed over said

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titanium-tungsten layer 22; said silicide layer 36, said titanium-tungsten layer 22 and said platinum layer 14A together forming an electrically conductive structure.

With respect to the recitation of 'a metallization stack in an integrated MEMS device' reflects only a preamble statement of an intended use of the claimed structure, which does not limit the scope of the claim and that the preamble generally is not accorded patentable weight, MPEP § 2112.02.

Regarding claims 2, 33, Mihara discloses the metallization stack of claim 1, wherein said electrically conductive structure is an active silicon element,

Regarding claim 3, Mihara discloses the metallization stack of claim 2a wherein said contact hole 26 exposes a portion of a surface of substrate at a bottom of the contact hole and silicide layer 36 is formed only on the exposed portion of the surface of substrate 30.

Regarding claims 4, 34 Mihara discloses the metallization stack wherein the said platinum layer 14A is a portion of a platinum wiring formed on field oxide 24.

Regarding claim 23, Mihara discloses the metallization stack wherein contact hole 26 exposes a portion of the a surface of substrate at a bottom of the contact hole 26 and silicide layer 36 is formed only on the exposed portion of the surface of substrate, wherein platinum layer being a portion of a platinum wire formed on field oxide 24, and platinum layer 14A portion of the platinum wire being formed on said titanium-tungsten layer 22.

Regarding claim 30-31, 39, Mihara discloses the metallization stack wherein silicide layer 26 is a platinum silicide layer, column 10 line 59

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 5-8, 24, 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5561307 to Mihara et al.

Regarding to claims 5, 6, 8, 24, 35-36, 38 Mihara does not expressly disclose the metallization stack in the optical MEMS, Bio-MEMS device.

However, at the time of the invention was made it would have been obvious to use the metallization stack teaching of Mihara in a device as claimed for intended use, MPEP § 2112.02.

Regarding to claims 7, 37, Mihara does not expressly disclose the metallization stack wherein the platinum layer forms a corrosive resistant electrode.

However, when the claimed and the prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 195 USPQ 430, 433 (CCPA 1977).

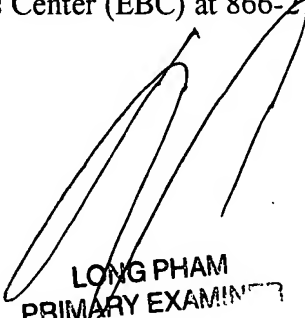
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao X Le whose telephone number is (571) 272-1708. The examiner can normally be reached on M-F from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M Fahmy can be reached on (571) 272 -1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thao X. Le
12 April 2004



LONG PHAM
PRIMARY EXAMINER